

1. (PREVIOUSLY PRESENTED) A system for automatically providing combined digital data in a form integrated with at least one of flight tracks, noise events, and complaint data, the system comprising:

means for receiving flight track data;

means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data;

means for receiving at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data; and

means for applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event.

2. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for receiving flight track data comprises a multilateration system for determining aircraft flight track by multilaterating radio signals received from the aircraft.

3. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for receiving flight track data comprises a passive radar system.

4. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for receiving flight track data comprises an air traffic control radar.

5. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting altitude exceedance of a flight track from a predetermined flight path.

6. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting a long duration lateral exceedance of a flight track from a predetermined flight path for more than a predetermined period of time.

7. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for comparing the flight track data to a set of predetermined

parameters to determine if an event has occurred and producing event data comprises:

means for detecting a short duration lateral exceedance of a flight track from a predetermined flight path for less than a predetermined period of time.

8. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting at least one of a speed or thrust exceedance of a flight track from a predetermined flight path.

9. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises means for applying the knowledge-based rules in real time to the event data.

10. (PREVIOUSLY PRESENTED) The system of claim 1, wherein said means for applying knowledge-based rules to the event data and the at

least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises means for post-processing the knowledge-based rules to stored event data.

11. (PREVIOUSLY PRESENTED) The system of claim 1, wherein airport operations data comprises one or more of Runways and types of approaches in use; Runway category of operation, Category I, II, III; Runway visual range (visibility on each runway); Airports operating in instrument of visual conditions (IFR/VFR operations); NOTAMS in effect ("notices to airmen"); Status of radar services at the airport and other nearby airports; Runways that are closed; Portions of taxiways that are closed; Construction crews working at the airport; Average runway occupancy time by aircraft type; and Average taxi time by aircraft type.

12. (PREVIOUSLY PRESENTED) A method for automatically providing combined digital data in a form integrated with at least one of flight tracks, noise events, and complaint data, the method comprising the steps of:

receiving flight track data,

comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data,

receiving at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data, and

applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event.

13. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of receiving flight track data comprises the step of multilaterating radio signals received from the aircraft to generate flight track data.

14. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of receiving flight track data comprises receiving flight track data from a passive radar system.

15. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of receiving flight track data comprises receiving flight track data from an air traffic control radar.

16. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting altitude exceedance of a flight track from a predetermined flight path.

17. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting a long duration lateral exceedance of a flight track from a predetermined flight path for more than a predetermined period of time.

18. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting a short duration lateral exceedance of a flight track from a predetermined flight path for less than a predetermined period of time.

19. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting at least one of a speed or thrust exceedance of a flight track from a predetermined flight path.

20. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises the step of applying the knowledge-based rules in real time to the event data.

21. (PREVIOUSLY PRESENTED) The method of claim 12, wherein the step of applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises the step of post-processing the knowledge-based rules to stored event data.

22. (PREVIOUSLY PRESENTED) The method of claim 12, wherein airport operations data comprises one or more of Runways and types of approaches in use, Runway category of operation, Category I, II, III,

Runway visual range (visibility on each runway), Airports operating in instrument of visual conditions (IFR/VFR operations), NOTAMS in effect ("notices to airmen"), Status of radar services at the airport and other nearby airports, Runways that are closed, Portions of taxiways that are closed, Construction crews working at the airport, Average runway occupancy time by aircraft type, and Average taxi time by aircraft type.

23. (CANCELLED)

24. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for receiving flight track data comprises a multilateration system for determining aircraft flight track by multilaterating radio signals received from the aircraft.

25. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for receiving flight track data comprises a passive radar system.



26. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for receiving flight track data comprises an air traffic control radar.

27. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting altitude exceedance of a flight track from a predetermined flight path.

28. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting a long duration lateral exceedance of a flight track from a predetermined flight path for more than a predetermined period of time.

29. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for comparing the flight track data to a set of

predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting a short duration lateral exceedance of a flight track from a predetermined flight path for less than a predetermined period of time.

30. (CURRENTLY AMENDED) The system ~~of claim 23~~ of claim 31, wherein said means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises:

means for detecting at least one of a speed or thrust exceedance of a flight track from a predetermined flight path.

31. (CURRENTLY AMENDED) A system ~~The system of claim 23 for~~ automatically providing combined digital data in a form integrated with at least one of flight tracks, noise events, and complaint data, the system comprising:

means for receiving flight track data;

means for comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data;

means for receiving at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data; and

means for correlating the event data to at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data,

wherein said means for applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises means for applying the knowledge-based rules in real time to the event data.

32. (CURRENTLY AMENDED) A system ~~The system of claim 23 for~~  
automatically providing combined digital data in a form integrated  
with at least one of flight tracks, noise events, and complaint data,  
the system comprising:

means for receiving flight track data;

means for comparing the flight track data to a set of  
predetermined parameters to determine if an event has occurred and  
producing event data;

means for receiving at least one of ATIS, D-ATIS, AWOS, LLWAS,  
TCAS, ACARS and airport operations data; and

means for correlating the event data to at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data,

wherein said means for applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event

comprises means for post-processing the knowledge-based rules to stored event data.

33. (CURRENTLY AMENDED) A system ~~The system of claim 23 for~~  
automatically providing combined digital data in a form integrated  
with at least one of flight tracks, noise events, and complaint data,  
the system comprising:

means for receiving flight track data;

means for comparing the flight track data to a set of  
predetermined parameters to determine if an event has occurred and  
producing event data;

means for receiving at least one of ATIS, D-ATIS, AWOS, LLWAS,  
TCAS, ACARS and airport operations data; and

means for correlating the event data to at least one of ATIS, D-  
ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data,

wherein airport operations data comprises one or more of Runways and types of approaches in use; Runway category of operation, Category I, II, III; Runway visual range (visibility on each runway); Airports operating in instrument of visual conditions (IFR/VFR operations); NOTAMS in effect ("notices to airmen"); Status of radar services at the airport and other nearby airports; Runways that are closed; Portions of taxiways that are closed; Construction crews working at the airport; Average runway occupancy time by aircraft type; and Average taxi time by aircraft type.

34. (CANCELLED)

35. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of receiving flight track data comprises the step of multilaterating radio signals received from the aircraft to generate flight track data.

36. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of receiving flight track data comprises receiving flight track data from a passive radar system.

37. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of receiving flight track data comprises receiving flight track data from an air traffic control radar.

38. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and

producing event data comprises the step of detecting altitude exceedance of a flight track from a predetermined flight path.

39. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting a long duration lateral exceedance of a flight track from a predetermined flight path for more than a predetermined period of time.

40. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting a short duration lateral exceedance of a flight track from a predetermined flight path for less than a predetermined period of time.

41. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein the step of comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data comprises the step of detecting at least one of a

speed or thrust exceedance of a flight track from a predetermined flight path.

42. (CURRENTLY AMENDED) A method ~~The method of claim 34 for~~ automatically providing combined digital data in a form integrated with at least one of flight tracks, noise events, and complaint data, the method comprising the steps of:

receiving flight track data,

comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data,

receiving at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data, and

correlating the event data to the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data,

wherein the step of applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises the step of applying the knowledge-based rules in real time to the event data.

43. (CURRENTLY AMENDED) A method ~~The method of claim 34 for~~ automatically providing combined digital data in a form integrated with

at least one of flight tracks, noise events, and complaint data, the method comprising the steps of:

receiving flight track data,

comparing the flight track data to a set of predetermined parameters to determine if an event has occurred and producing event data,

receiving at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data, and

correlating the event data to the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data,

wherein the step of applying knowledge-based rules to the event data and the at least one of ATIS, D-ATIS, AWOS, LLWAS, TCAS, ACARS and airport operations data to determine possible causes of the event comprises the step of post-processing the knowledge-based rules to stored event data.

44. (CURRENTLY AMENDED) The method ~~of claim 34~~ of claim 42, wherein airport operations data comprises one or more of Runways and types of approaches in use, Runway category of operation, Category I, II, III, Runway visual range (visibility on each runway), Airports operating in instrument of visual conditions (IFR/VFR operations), NOTAMS in effect ("notices to airmen"), Status of radar services at the airport and other nearby airports, Runways that are closed, Portions of taxiways that are closed, Construction crews working at the airport,



Average runway occupancy time by aircraft type, and Average taxi time by aircraft type.